

CLAIMS

We claim:

1. A process for fabricating a leadless plastic chip carrier, comprising:
 - selectively etching at least a first surface of a leadframe strip to partially define at least a plurality of contact pads and a die attach pad;
 - selectively plating at least one layer of metal on a second surface of said leadframe strip, on an undersurface of at least said plurality of contact pads and said die attach pad;
 - mounting a semiconductor die on said first surface, on the partially defined die attach pad;
 - wire bonding said semiconductor die to ones of said contact pads;
 - encapsulating said wire bonds and the semiconductor die in a molding material such that said molding material covers a first portion of said die attach pad and first portions of said contact pads;
 - selectively etching a second surface of said leadframe strip to define a second portion of said contact pads and a second portion of said die attach pad by etching said second surface with said at least one layer of metal resisting etching; and
 - singulating said leadless plastic chip carrier from said leadframe strip.
2. The process for fabricating a leadless plastic chip carrier according to claim 1, further comprising selectively plating at least one layer of metal on said first surface of said leadframe strip, prior to mounting said semiconductor die.
3. The process for fabricating a leadless plastic chip carrier according to claim 2, wherein selectively plating at least one layer of metal on said first surface of said leadframe strip comprises selectively plating at least one layer of metal on a peripheral portion of said first surface of said die attach pad and on a surface of said first portion of said contact pads for facilitating ground wire bonding to said die attach pad and wire bonding to said contact pads.
4. The process for fabricating a leadless plastic chip carrier according to claim 3, wherein said selectively plating said at least one layer of metal on said first surface and said selectively plating said at least one layer of metal on said second surface is carried out in a

single plating step.

5. The process for fabricating a leadless plastic chip carrier according to claim 1, further comprising coating said second portion of said die attach pad and said second portion of said contact pads for oxidation protection.

6. The process for fabricating a leadless plastic chip carrier according to claim 5 wherein coating comprises dipping at least a portion of said leadless plastic chip carrier in at least one of tin, solder dipping, and organic surface protection.

7. The process for fabricating a leadless plastic chip carrier according to claim 1 wherein said at least one layer of metal is selected from the group consisting of a layer of silver, layers of nickel and gold, and layers of nickel and palladium.

8. The process for fabricating a leadless plastic chip carrier according to claim 1, wherein said step of selectively plating further includes selectively plating a perimeter portion of said leadframe strip for providing package rigidity, said perimeter portion being removed by said singulating.

9. A process for fabricating a leadless plastic chip carrier, comprising:

- selectively etching at least a first surface of a leadframe strip to partially define at least a plurality of contact pads and a die attach pad;
- selectively plating at least one layer of metal on said first surface of said leadframe strip and on a second surface of said leadframe strip, on an undersurface of at least said plurality of contact pads and said die attach pad;
- mounting a semiconductor die on said first surface, on the partially defined die attach pad;
- wire bonding said semiconductor die to ones of said contact pads;
- encapsulating said wire bonds and the semiconductor die in a molding material such that said molding material covers a first portion of said die attach pad and first portions of said contact pads;
- selectively etching a second surface of said leadframe strip to define a second portion of said contact pads and a second portion of said die attach pad by etching said second

surface with said at least one layer of metal on said second surface resisting etching; and singulating said leadless plastic chip carrier from said leadframe strip.

10. The process for fabricating a leadless plastic chip carrier according to claim 9, further comprising coating said second portion of said die attach pad and said second portion of said contact pads for oxidation protection.

11. The process for fabricating a leadless plastic chip carrier according to claim 10, wherein coating comprises dipping at least a portion of said leadless plastic chip carrier in at least one of tin, solder dipping, and organic surface protection.

12. The process for fabricating a leadless plastic chip carrier according to claim 9 wherein said at least one layer of metal is selected from the group consisting of a layer of silver, layers of nickel and gold, and layers of nickel and palladium.

13. The process for fabricating a leadless plastic chip carrier according to claim 9, wherein said step of selectively plating further includes selectively plating a perimeter portion of said leadframe strip for providing package rigidity, said perimeter portion being removed by said singulating.